

WHAT IS CLAIMED IS:

- 1 1. A computer-readable storage medium having data structures stored
2 thereon or a computer-readable propagated signal having data structures, the data
3 structures comprising:
4 an access control group data structure to store access control group data;
5 a user access data structure to store user access data wherein the user access data
6 relates to at least one entry in the access control group data structure; and
7 a data object access data structure to store data object access data wherein the data
8 object access data relates to at least one entry in the access control group data structure.
- 1 2. The medium or propagated signal of claim 1 wherein at least one entry in
2 the access control group data includes a characteristic for use in determining at least one
3 entry in the user access data structure that relates to the at least one entry in the access
4 control group data structure.
- 1 3. The medium or propagated signal of claim 1 wherein at least one entry in
2 the access control group data structure includes a characteristic for use in determining at
3 least one entry in the data object access data structure that relates to the at least one entry
4 in the access control group data structure.
- 1 4. The medium or propagated signal of claim 1 wherein at least one entry in
2 the access control group data structure includes:
3 a user characteristic for use in determining at least one entry in the user access
4 data structure that relates to the at least one entry in the access control group data
5 structure, and
6 an object characteristic for use in determining at least one entry in the data object
7 access data structure that relates to the at least one entry in the access control group data
8 structure.

1 5. The medium or propagated signal of claim 1 wherein at least one entry in
2 the access control group data structure includes an indication of an access control rule for
3 use in determining:

4 at least one entry in the user access data structure that relates to the at least one
5 entry in the access control group data structure, and

6 at least one entry in the data object data structure that relates to the at least one
7 entry in the access control group data structure.

1 6. The medium or propagated signal of claim 1 wherein at least one entry in
2 the data object access data structure includes an indication of action that is permitted to
3 be performed on a data object identified in the at least one entry in the data object access
4 data structure.

1 7. The medium or propagated signal of claim 1 wherein:
2 at least one entry in the user access data structure includes an indication of action
3 that is permitted to be performed by a user identified in the at least one entry in the user
4 access data structure on a data object identified in the at least one entry in the data object
5 access data structure such that the at least one entry in the data object access data
6 structure relates to the at least one entry in the user access data structure.

1 8. The medium or propagated signal of claim 1 further comprising an access
2 rule data structure to store access control rule data wherein the access control rule data
3 relates to at least one entry in the access control group data structure.

1 9. The medium or propagated signal of claim 8 wherein at least one entry in
2 the access rule data structure includes an indication of action that is permitted to be
3 performed for at least one entry in the data object access data structure.

1 10. The medium or propagated signal of claim 8 wherein at least one entry in
2 the access rule data structure includes an indication of how to determine at least one entry

3 in the data object access data structure that relates to at least one entry in the access
4 control group data structure.

1 11. The medium or propagated signal of claim 8 wherein at least one entry in
2 the access rule data structure includes an indication of how to determine at least one entry
3 in the user access data structure that relates to at least one entry in the access control
4 group data structure.

1 12. The medium or propagated signal of claim 1 wherein each of the access
2 control group data structure, the user access data structure, and the data object access data
3 structure are each separately maintainable from each of the other data structures.

1 13. The medium or propagated signal of claim 1 wherein each of the user
2 access data structure and the data object access data structure are separately maintainable
3 from the other data structure.

1 14. The medium or propagated signal of claim 13 wherein a change in the user
2 access data stored in the user access data structure does not necessitate a change in the
3 data object access data stored in the data object access data structure to maintain desired
4 control over access by particular users to particular data objects.

1 15. The medium or propagated signal of claim 13 wherein a change in the data
2 object access data stored in the data object access data structure does not necessitate a
3 change in the user access data stored in the user access data structure to maintain desired
4 control over access by particular users to particular data objects.

1 16. A computer-readable storage medium having data structures stored
2 thereon or a computer-readable propagated signal having data structures, the data
3 structures comprising:
4 an access control rule data structure to store access control rule data; and

5 a characteristic method data structure to store characteristic method data wherein
6 the characteristic method data relates to at least one entry in the access control rule data
7 structure.

1 17. The medium or propagated signal of claim 16 further comprising a user
2 data structure to store user data.

1 18. The medium or propagated signal of claim 17 wherein at least one entry in
2 the characteristic method data structure includes an indication of a method to determine a
3 user characteristic associated with at least one entry in the user data structure.

1 19. The medium or propagated signal of claim 18 wherein at least one entry in
2 the access control rule data structure includes an indication of a criterion for use in
3 eliminating at least one entry in the data object data structure when using the method to
4 determine a user characteristic.

1 20. The medium or propagated signal of claim 18 wherein at least one entry in
2 the characteristic method data structure includes an indication of a criterion for use in
3 eliminating at least one entry in the data object data structure when using the method to
4 determine a user characteristic.

1 21. The medium or propagated signal of claim 16 further comprising a data
2 object data structure to store data object data.

1 22. The medium or propagated signal of claim 21 wherein at least one entry in
2 the characteristic method data structure includes an indication of a method to determine a
3 data object characteristic associated with at least one entry in the data object data
4 structure.

1 23. The medium or propagated signal of claim 21 wherein at least one entry in
2 the characteristic method data structure includes an indication of a criterion for use in

3 eliminating at least one entry in the data object data structure when using the method to
4 determine a data object characteristic.

1 24. The medium or propagated signal of claim 21 wherein at least one entry in
2 the access control rule data structure includes an indication of a criterion for use in
3 eliminating at least one entry in the data object data structure when using the method to
4 determine a data object characteristic.

1 25. An apparatus including a computer-readable storage medium having data
2 structures stored thereon, the data structures comprising:
3 an access control group data structure to store access control group data;
4 a user access data structure to store user access data wherein the user access data
5 relates to at least one entry in the access control group data structure; and
6 a data object access data structure to store data object access data wherein the data
7 object access data relates to at least one entry in the access control group data structure.

1 26. An apparatus including a computer-readable storage medium having data
2 structures stored thereon, the data structures comprising:
3 an access control rule data structure to store access control rule data; and
4 a characteristic method data structure to store characteristic method data wherein
5 the characteristic method data relates to at least one entry in the access control rule data
6 structure.